

Title: The NASA Space Launch System Program Systems Engineering Approach for Affordability

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The National Aeronautics and Space Administration is currently developing the Space Launch System to provide the United States with a capability to launch large Payloads into Low Earth orbit and deep space. One of the development tenets of the SLS Program is affordability. One initiative to enhance affordability is the SLS approach to requirements definition, verification and system certification. The key aspects of this initiative include: 1) Minimizing the number of requirements, 2) Elimination of explicit verification requirements, 3) Use of certified models of subsystem capability in lieu of requirements when appropriate and 4) Certification of capability beyond minimum required capability. Implementation of each aspect is described and compared to a “typical” systems engineering implementation, including a discussion of relative risk. Examples of each implementation within the SLS Program are provided.